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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/698,201	10/30/2000	Tae-kyung Kim	1293.1144/MDS	6730

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WASHINGTON, DC 20005

EXAMINER
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CHU, KIM KWOK

ART UNIT	PAPER NUMBER
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2653

DATE MAILED: 02/08/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

<b>Office Action Summary</b>	<b>Application No.</b> 09/698,201	<b>Applicant(s)</b> KIM ET AL.	
	<b>Examiner</b> Kim-Kwok CHU	<b>Art Unit</b> 2653	

**-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --**  
**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

#### Status

- 1) ☒ Responsive to communication(s) filed on 18 January 2005.
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

#### Disposition of Claims

- 4) ☒ Claim(s) 1-82 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 1-59, 61-73 and 75-82 is/are allowed.
- 6) ☒ Claim(s) 49, 60 and 74 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

#### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 30 October 2000 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

#### Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).  
a) ☒ All    b) ☐ Some \*    c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.

#### Attachment(s)

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)  | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)                                   | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)             |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)<br>Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____  |

***Claim Rejections - 35 USC § 102***

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. § 102 that form the basis for the rejections under this section made in this Office action:

*A person shall be entitled to a patent unless -  
(e) the invention was described in a patent granted on an application for patent by another filed in the United States before the invention thereof by the applicant for patent, or on an international application by another who has fulfilled the requirements of paragraphs (1), (2), and (4) of section 371(c) of this title before the invention thereof by the applicant for patent.*

2. Claims 49, 60 and 74 are rejected under 35 U.S.C. § 102(e) as being anticipated by Arai (U.S. Patent 6,411,587).

Arai teaches an optical pickup having all of the elements and means as recited in claim 49. For example, Arai teaches the following:

(a) as in claim 49, a light source 111 to generate a first light beam with a wavelength within a wavelength range of wavelength under 500 nm and which includes 400 nm for use with recording and/or reproducing with respect to a first medium (Fig. 21; blue laser has a wavelength range under 500 nm; column 17, lines 12-15; column 20, lines 47-56; structures 50 and 61);

(b) as in claim 49, a second light beam with a wavelength outside of the range (400 nm) and which is roughly 650 nm for use with recording and/or reproducing with respect to a second medium other than the first medium (Fig. 21; red laser has a wavelength

range roughly about 650 nm; column 17, lines 12-15; column 20, lines 47-56; structures 50, 60 and 61);

(c) as in claim 49, an optical element 115 to focus a generated one of the first and second light beams onto a received one of the first and second media (Fig. 11);

(d) as in claim 49, a detector 300 to detect the generated light beam reflected from the received one medium (Fig. 21;

(e) a collimating lens 113 arranged in an optical path between the light source and an optical element 115 (Fig. 11);

(f) the collimating lens 113 having a diverging lens 113 with a diverging power (Fig. 11; structure 60, column 19, lines 56-61);

(g) the diverging power of the diverging lens 113 is sufficient to allow the optical element 115 be capable of focusing the first light beam for each of the wavelengths within the range onto the first medium with negligible aberration (Figs. 11 and 25); and

(h) the diverging power of the diverging lens 113 is sufficient to allow the optical element 115 be capable of focusing the second light beam with the wavelength of roughly 650 nm onto the second medium with negligible aberration (Figs. 11 and 25).

3. Claim 60 has limitations similar to those treated in the above rejection, and is met by the reference as discussed above. Claim 60 however also recites the following limitation which is also taught by the prior art of Arai:

(a) one of the wavelengths is within a range that is less than roughly 500 nm and another one of the wavelength is more than roughly 500 nm (Figs. 21; structure 50; column 17, lines 13-15; blue and red laser light sources have wavelengths slightly different to each other).

4. Claim 74 has limitations similar to those treated in the above rejection, and is met by the reference as discussed above. Claim 60 however also recites the following limitation which is also taught by the prior art of Arai:

(a) as in claim 74, the diverging power allow the optical pickup to focus the another light beam onto the digital versatile disc (DVD) with negligible aberration (Figs. 11 and 21; 650 nm is for DVD).

***Allowable Subject Matter***

5. Claims 1-48, 50-59, 61-73 and 75-82 are allowable over prior art.

6. The following is an Examiner's statement of reasons for the indication of allowable subject matter:

As in claims 1, 9, 15, 20, 25, 50, 61, 71 and 75, the prior art fail to teach or fairly suggest an optical pickup having a collimating lens including a diverging lens with diverging power and a focusing lens with focusing power. The collimating lens satisfies the relationship  $-1.5 > f/f_n$ , where  $f$  is a total focal length of the collimating lens, and  $f_n$  is a focal length of the diverging lens.

The features indicated above, in combination with the other elements of the claims, are not anticipated by, nor made obvious over, the prior art of record.

***Conclusion***

7. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Shimozono et al. (6,097,691) is pertinent because Shimozono teaches an information recording system having a diverging lens for one light source.

8. Any response to this action should be mailed to:

Commissioner of Patents and Trademarks Washington, D.C.  
20231

or faxed to:  
(703) 872-9306, (for formal communications intended for  
entry)

Or:  
(703) 746-6909, (for informal or draft communications,  
please label "PROPOSED" or "DRAFT")

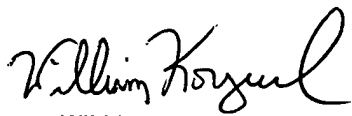
Hand-delivered responses should be brought to Crystal Park  
II, 2021 Crystal Drive, Arlington. VA., Sixth Floor  
(Receptionist).

Any inquiry of a general nature or relating to the status of  
this application should be directed to the Group receptionist  
whose telephone number is (703) 305-3900.

Any inquiry concerning this communication or earlier  
communications from the examiner should be directed to Kim CHU  
whose telephone number is (703) 305-3032.

kc 2/4/05  
Kim-kwok CHU  
Examiner AU2653  
February 4, 2005

(703) 305-3032

  
WILLIAM KORZUCH  
SUPERVISORY PATENT EXAMINER  
TECHNOLOGY CENTER 2600